

IN THE CLAIMS

Please cancel claims 1-28 and add new claims 29 - 51 as follows:

1-28. Canceled.

29. (New) A coated medical device comprising a medical device including one or more surfaces coated with a coating formed from a composition including self-assembling monolayer molecules adjoined to the one or more surfaces with one or more latent reactive groups.

30. (New) The medical device according to claim 29 wherein the self-assembling monolayer molecules comprise amphiphilic molecules comprised of either: a) a hydrophobic domain which spontaneously associates with the surface from a polar solvent, and of a hydrophilic domain which allows the molecules to be dispersed in the polar solvent and which remains associated with the polar phase after monolayer formation on the surface, or b) a hydrophilic domain which spontaneously associates with the surface from a nonpolar solvent, and of a hydrophobic domain which allows the molecules to be dispersed in a nonpolar solvent and which remains associated with the nonpolar phase after monolayer formation on the surface.

31. (New) The medical device according to claim 29 wherein the self-assembling monolayer is adapted for use with substantially flat or molded surfaces.

32. (New) The medical device according to claim 31 wherein the one or more surfaces of the medical device are provided by a material selected from ceramics, metals and polymeric materials.

33. (New) The medical device according to claim 31 wherein the one or more surfaces of the medical device are provided by a material selected from organosilane-pretreated glasses, organosilane-pretreated silicon materials, and silicon hydrides.

34. (New) The medical device according to claim 31 wherein the material comprises a polymeric material selected from the group consisting of polystyrene, polycarbonate, polyester, polyethylene, polyethylene terephthalate (PET), polyglycolic acid (PGA), polyolefin, poly-(p-phenyleneterephthalamide), polyphosphazene, polypropylene, polytetrafluoroethylene, polyurethane, polyvinyl chloride, polyacrylate (including polymethacrylate), and silicone elastomers, as well as copolymers and combinations thereof.

35. (New) The medical device according to claim 29 wherein the medical device comprises an implantable biosensor.

36. (New) The medical device according to claim 29 wherein the medical device is an implantable device having small pores.

37. (New) The medical device according to claim 36 wherein the medical device comprises a distal protection device for use in various vascular surgical procedures.

38. (New) The medical device according to claim 29 wherein the latent reactive groups comprise photoreactive groups in the form of photoreactive aryl ketones.

39. (New) The medical device according to claim 29 wherein the self-assembling monolayer molecules themselves provide thermochemical reactive groups and wherein binding molecules are attached to the monolayer by reaction between corresponding reactive groups of the binding molecules and the reactive groups of the self-assembling monolayer molecules.

40. (New) The medical device according to claim 39 wherein the binding molecules have one or more corresponding thermochemical reactive groups attached to the self-assembling monolayer molecules via thermochemical interactions between their respective thermochemical reactive groups, and wherein the surface is coated with the monolayer in order to provide an immobilized self-assembling monolayer having the binding molecules attached thereto.

41. (New) The medical device according to claim 40 wherein the binding molecule is selected from the group consisting of coupling molecules and biological polymers, and the binding molecules are attached to the self-assembling monolayer molecules prior to coating and immobilizing the self-assembling monolayer.

42. (New) The medical device according to claim 29 wherein the molecules are selected from the group consisting of linoleamide poly(ethylene glycol) and polyethers.

43. (New) The medical device of claim 29, wherein the medical device is implanted into a body to provide a passivating effect.

44. (New) The medical device of claim 44 wherein the latent reactive groups are provided by the surface itself.

45. (New) The medical device of claim 44 wherein the self-assembling monolayer forming molecules have themselves been provided with latent reactive groups.

46. (New) A coated medical device comprising a medical device including a surface coated with a self-assembling monolayer, the self-assembling monolayer formed by the steps of: a) providing on the surface both latent reactive groups and a monolayer formed of self-assembling monolayer molecules, and b) activating the latent reactive groups under conditions suitable to either covalently attach the self-assembled monolayer to the surface and/or to form a stable monolayer film on the surface, by initiating polymerization of suitable groups provided by self-assembling monolayer molecules and/or by forming intermolecular bonds between the self-assembling monolayer molecules.

47. (New) The medical device of claim 46 wherein the latent reactive groups are provided by the surface itself.
48. (New) The medical device of claim 46 wherein the self-assembling monolayer forming molecules have themselves been provided with latent reactive groups.
49. (New) The medical device of claim 46 wherein the self-assembling monolayer molecules are amphiphilic molecules comprising a plurality of hydrophobic and hydrophilic domains.
50. (New) The medical device of claim 49 wherein the hydrophilic domain comprises a polyether.
51. (New) The medical device of claim 49 wherein the hydrophobic domain comprises poly (propylene oxide), poly (butylene oxide), or a fatty acid.